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EXAMINER

RIOS CUEVAS, ROBERTO JOSE

ART UNIT

PAPER NUMBER

2836

DATE MAILED: 08/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/777,988

Applicant(s)

NERONE ET AL. *CW*

Examiner

Roberto J Rios

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 May 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 February 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Specification***

1. The objection to the Abstract is withdrawn.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-4, and 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwasaki (US patent 4,463,341) in view of Fendt et al (US patent 6,477,457).

As per claim 1, Iwasaki teaches a data/power transmission system comprising: a load receiver (90) for powering and controlling loads, said load receiver comprising a decoupler (C21,T2) for decoupling a communication signal from an electrical power bus, said communication signal containing encoded load information, wherein the decoupler electrically isolates the communication signal from the power signal (col. 6, line 46); a data receiver for receiving the communication signal from the decoupler and deriving data therefrom (col. 6, line 66); a data decoder for decoding data received from the data receiver and converting it to an activation signal according to the encoded load information (col. 7, line 23+) but does not specifically disclose providing a power converter for receiving the activation signal from the data decoder, wherein the power converter converts an electrical power bus input of a first voltage into a power output at

a second voltage for powering the loads. However, Fendt et al (herein after Fendt) teach a data-power transmission system comprising a receiver including a power converter (9) for converting an electrical power bus input of a first voltage into a second voltage for powering loads, wherein an activation signal (S2) based on data modulated onto a power bus is provided to said converter (col. 4, line 62).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the teachings of Iwasaki with the teachings of Fendt such that a power converter is provided for the purpose of providing the load an appropriate operating/charging voltage.

As per claim 2, Iwasaki teaches a load transmitter (70) for transmitting encoded load information in a communication signal onto the electrical power bus, said load transmitter comprising: a data encoder for encoding load information into data (col. 4, line 49); a data transmitter for receiving the data from the data encoder and transmitting a communication signal (col. 5, line 1); and a coupler for receiving the communication signal from the data transmitter and coupling the communication signal onto the electrical power bus (col. 5, line 31).

As per claims 3 and 4, Iwasaki teaches the load information containing load state and load address information (col. 5, line 49), wherein said signal is received by said receiver to set the state of the load according to said signal. Fendt teaches the power converter powering the load according to the signal when the power converter is powering the load associated with that load address (col. 4, line 64).

As per claims 7-10, the teachings of Iwasaki in view of Fendt teaches a power converter to receiving a first voltage and providing a second voltage but does not specifically disclose a particular input/output voltage level. However, the Examiner takes official notice that to select a particular input/out voltage level would be an engineering design choice based generally on the power source and load capacity of a system. Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the teachings of Iwasaki in view of Fendt such that a 33V-42V to 12V-14V converter is provided for the purpose of adapting the system to a high-voltage power source application including low-voltage loads. The Examiner wants to point out that applicant has failed to seasonably traverse the official notice taken in the last office action mailed on 03/21/2003. If applicant does not seasonably traverse the well-known statement during examination, then the object of the well-known statement is taken to be admitted prior art. *In re Chevenard*, 139 F.2d 71, 60 USPQ 239 (CCPA 1943). A seasonable challenge constitutes a demand for evidence made as soon as practicable during prosecution. Thus, applicant was charged with rebutting the well-known statement in the next reply (i.e., Response filed on 05/19/2003) after the Office action in which the well-known statement was made (i.e., Non-Final rejection mailed on 03/21/2003), MPEP§ 2144.03.

4. Claims 13-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwasaki in view of Fendt and Smith et al (US patent 5,533,061)

As per claims 13 and 16, Iwasaki teaches a data/power transmission system for powering vehicle loads, comprising: a load transmitter for transmitting encoded load

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information in a communication signal onto a vehicle electrical power bus, said load transmitter comprising: a data encoder for encoding load state and load address information into encoded data; a transmitter for receiving the encoded data from the data encoder and transmitting the encoded data; and a coupler for coupling the communication signal onto the vehicle electrical power bus; and a load receiver for controlling vehicle loads and providing said vehicle loads with electrical power, said load receiver comprising: a decoupler for decoupling the communication signal from an electrical power bus, said communication signal containing encoded load state and load address information, wherein the decoupler electrically isolates the communication signal from the power signal; a receiver for receiving the communication signal from the decoupler and deriving encoded data from the communication signal; a data decoder for decoding the encoded data received from the receiver and converting it into a converter signal according to the decoded load state and load address information; but does not specifically receiving the signal from the data decoder, wherein a power converter converts an electrical power bus input of a first voltage into a power output at a second voltage for powering the loads. However, Fendt et al (herein after Fendt) teach a data-power transmission system comprising a receiver including a power converter (9) for converting an electrical power bus input of a first voltage into a second voltage for powering loads, wherein an activation signal (S2) based on data modulated onto a power bus is provided to said converter (col. 4, line 62).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the teachings of Iwasaki with the teachings of Fendt such

that a power converter is provided for the purpose of providing the load an appropriate operating/charging voltage.

The teachings of Iwasaki in view of Fendt teaches a power converter to receiving a first voltage and providing a second voltage but does not specifically disclose a particular input/output voltage level. However, the Examiner takes official notice that to select a particular input/out voltage level would be an engineering design choice based generally on the power source and load capacity of a system. Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the teachings of Iwasaki in view of Fendt such that a 33V-42V to 12V-14V converter is provided for the purpose of adapting the system to a high-voltage power source application including low-voltage loads. The Examiner wants to point out that applicant has failed to seasonably traverse the official notice taken in the last office action mailed on 03/21/2003. If applicant does not seasonably traverse the well-known statement during examination, then the object of the well-known statement is taken to be admitted prior art. *In re Chevenard*, 139 F.2d 71, 60 USPQ 239 (CCPA 1943). A seasonable challenge constitutes a demand for evidence made as soon as practicable during prosecution. Thus, applicant was charged with rebutting the well-known statement in the next reply (i.e., Response filed on 05/19/2003) after the Office action in which the well-known statement was made (i.e., Non-Final rejection mailed on 03/21/2003), MPEP § 2144.03.

Iwasaki teaches modulating and demodulating a data signal but does not specifically disclose using FSK modulation. However, Smith et al (herein after Smith)

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teach that among modulation techniques available, FSK offers a number of advantages with respect to noise immunity and average signal power level. Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the teachings of Iwasaki with the teachings of Smith such that FSK modulation is implemented for the purpose of improve noise immunity and average signal power level.

As per claims 14, 15, 17 and 18, Fendt teaches a DC-DC converter (9) but does not specifically disclose providing a DC-AC inverter. However, the Examiner takes official notice that it is well known in the art to selectively provide either a DC-DC or a DC-AC converter depending on the vehicle load type. Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the teachings of Iwasaki such that a DC-AC inverter is provided for the purpose providing power to AC loads. The Examiner wants to point out that applicant has failed to seasonably traverse the official notice taken in the last office action mailed on 03/21/2003. If applicant does not seasonably traverse the well-known statement during examination, then the object of the well-known statement is taken to be admitted prior art. *In re Chevenard*, 139 F.2d 71, 60 USPQ 239 (CCPA 1943). A seasonable challenge constitutes a demand for evidence made as soon as practicable during prosecution. Thus, applicant was charged with rebutting the well-known statement in the next reply (i.e., Response filed on 05/19/2003) after the Office action in which the well-known statement was made (i.e., Non-Final rejection mailed on 03/21/2003), MPEP§ 2144.03.



5. Claims 5, 6, 11, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwasaki in view of Fendt as applied to claim 1 above, and further in view of Slavik (US patent 4,907,222).

As per claim 5, Iwasaki teaches the powering the load in response to a modulated signal but does not specifically disclose encoding and transmitting a load +signal back to the power bus. However, Slavik teaches a data/power transmission system, wherein a load signal is encoded and transmitted back to a power bus (col. 2, line11).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the teachings of Iwasaki with the teachings of Slavik such that a load signal is encoded and transmitted back to the power bus for the purpose of indicating to a remote location a condition of the load.

As per claim 6, Iwasaki teaches the load information containing load state and load address information (col. 5, line 49), wherein said signal is received by said receiver to set the state of the load according to said signal. Fendt teaches the power converter powering the load according to the signal when the power converter is powering the load associated with that load address (col. 4, line 64).

As per claims 11 and 12, the teachings of Iwasaki in view of Fendt teaches a power converter to receiving a first voltage and providing a second voltage but does not specifically disclose a particular input/output voltage level. However, the Examiner takes official notice that to select a particular input/out voltage level would be an engineering design choice based generally on the power source and load capacity of a

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system. Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the teachings of Iwasaki in view of Fendt such that a 33V-42V to 12V-14V converter is provided for the purpose of adapting the system to a high-voltage power source application including low-voltage loads. The Examiner wants to point out that applicant has failed to seasonably traverse the official notice taken in the last office action mailed on 03/21/2003. If applicant does not seasonably traverse the well-known statement during examination, then the object of the well-known statement is taken to be admitted prior art. *In re Chevenard*, 139 F.2d 71, 60 USPQ 239 (CCPA 1943). A seasonable challenge constitutes a demand for evidence made as soon as practicable during prosecution. Thus, applicant was charged with rebutting the well-known statement in the next reply (i.e., Response filed on 05/19/2003) after the Office action in which the well-known statement was made (i.e., Non-Final rejection mailed on 03/21/2003), MPEP§ 2144.03.

### ***Response to Arguments***

6. Applicant's arguments filed 5/19/2003 have been fully considered but they are not persuasive.

Applicant argues that Fendt does not teach a voltage converter and that a close reading of Fendt does not support the Examiner's conclusion. However, a closer review of Fendt's specification and drawings show that Fendt teaches (col. 3, line 33; col. 4, line 57) that data is modulated onto a D.C. voltage, which is supplied through a bus system 5. Moreover, Fendt teaches (co. 4, line 50) that intermediate storage device 4 is connected to a point between the bus system 5 and the ignition energy storage 2 (i.e.,

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receives bus voltage). Fendt further teaches (co. 4, line 62) that a “converter” 9 is arranged between the intermediate storage device 4 and the ignition energy storage 2 (i.e., receives the bus voltage that was previously provided to said storage device 4 and provides a converted output voltage to ignition energy storage 2). Fendt’s Figure 2 clearly shows current  $I_1$  coming from bus system 5, wherein said current is provided to said voltage converter 9 through charger 8 and intermediate storage device 4. Thus, ultimately converter 9 supplies a converted voltage provided by the bus voltage.

Applicant also argues that claim 1 recites that the power converter has the electrical power bus as an input. The Examiner respectfully disagrees. Claim 1 recites: “...the power converter converts an electrical power bus input of a first voltage...”. The limitation does not necessarily require the electrical power bus to be physically or directly connected to said power converter. Instead, it only requires the power converter receiving as an input electrical power bus voltage (See above paragraph for further clarification).

Applicant argues that Fendt specifically teaches that the charger unit 8 decouples the bus 5 from the intermediate storage device 4 (and hence converter 9), and thus the bus 5 is clearly not input to the converter 9, thus, the converter 9 never sees the bus voltage. Applicant’s interpretation of Fendt’s specification is incorrect. Fendt teaches that the charger 8 is decoupled only in response to a signal, wherein said charger is coupled again to said power bus in response to a reset signal. Thus, the rest of the time power converter receives bus voltage through charger 8 and intermediate storage device 4.

Applicant argues that the Examiner has not provided the proper motivation for combining the references and that some rationale for combining the references must be found in the references, or drawn from a convincing line of reasoning based on established scientific principles that some advantage or beneficial result would be produced by the combination. Fendt's Figure 2 shows an occupant protection device similar to the type disclosed in German Patent Publication 197 51 910 and its control module with an ignition current circuit. A careful review of said German Patent shows that "converter" 9 is in fact a DC/DC voltage converter that converts voltage U1 to a usable voltage U2. Moreover, a raw machine translation to English (provided by Altavista's Babel Fish Online Translation Services) of column 3, first paragraph recites:

***"Between the buffer 4 and the ignition energy storage 2 DC-DC transducer 9 is arranged, the this electrically from each other to decouple or mutually load can in addition is controllable it by means of a second signal s2 of the control unit 10 as a function of the operating condition and releasing instruction, the energizing voltage U2 at the ignition energy storage 2 is preferably more largely than the tension U1 at the buffer 4, there on the one hand from the tension electrical system 5 only the usual battery voltage, bspw. Approx.. 12 V, or one in the controller 7 prepared, bspw. stabilized and transformed tension are made available, meanwhile to energizing voltages of 3a volt and more are quite favorable, in order to be able to store the necessary ignition energy stores in a relatively small ignition n rgy storage 2".***

Therefore, by using a dc/dc converter a bus voltage can be converted to a usable voltage and in addition by selectively

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converting the bus voltage, small capacity ignition energy storage can be used, thus, meeting the advantage or beneficial result required by MPEP§2144.

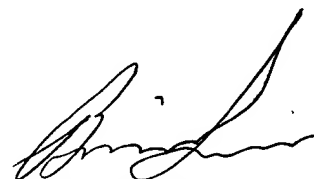
The Examiner wants to point out that applicant has failed to seasonably traverse each and every official notice taken in the last office action mailed on 03/21/2003. If applicant does not seasonably traverse the well-known statement during examination, then the object of the well-known statement is taken to be admitted prior art. In re Chevenard, 139 F.2d 71, 60 USPQ 239 (CCPA 1943). A seasonable challenge constitutes a demand for evidence made as soon as practicable during prosecution. Thus, applicant was charged with rebutting the well-known statement in the next reply (i.e., Response filed on 05/19/2003) after the Office action in which the well-known statement was made (i.e., Non-Final rejection mailed on 03/21/2003), MPEP§ 2144.03.

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

### **Communication with PTO**

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Roberto Rios whose telephone number is (703) 306-5518. In the event that Examiner Rios cannot be reached, his supervisor, Brian Sircus may be contacted at (703) 308-3119. The fax number for Before-Final communications is (703) 872-9318, for After-Final communications is (703) 872-9319, and for Customer Service is (703) 872-9317



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